



# Launch Mission Execution Forecast

**Mission:** Falcon 9 Transporter-2

**Issued:** 23 June 2021 / 0900L (1300Z)

**Valid:** 25 June 2021 / 1456 – 1554L (1856 – 1954Z)



**Forecast Discussion:** The subtropical ridge axis remains south of Central Florida, creating southwesterly flow hindering the inland progression of the east coast sea breeze each day. This creates higher chances for storms developing near the Spaceport, as well as driving inland storms eastward each afternoon and evening. Elsewhere a boundary in North Florida will gradually erode as the associated low pressure area pulls northward. As this boundary erodes, the subtropical ridge axis will begin to move north of the Space Coast. There is uncertainty on the timing of this transition, but most of the models have it north of the Spaceport on Friday. This will mean less storm coverage as the east coast sea breeze moves rapidly inland and drives any storms westward. The primary launch weather concerns Friday afternoon are the Cumulus Cloud Rule and the Thick Layer Cloud Rule associated with the lingering boundary.

On Saturday, models agree the subtropical ridge axis will be well north of the Spaceport and only scant remnants of the lingering boundary will remain. The primary weather concerns for a Saturday afternoon launch attempt are the Cumulus Cloud Rule and the Anvil Cloud Rules from storms developing inland.

Launch Day	Probability of Violating Weather Constraints							
	40%	Primary Concerns: Cumulus Cloud Rule, Thick Cloud Layer Rule						
	Weather Conditions						Additional Risk Criteria	
	Weather/Visibility:	Isold Showers / 7 mi.	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
	Temp/Humidity:	85°F / 72%	Cumulus	Scattered	3,000	10,000	Booster Recovery Weather:	Low
24-Hour Delay	Liftoff Winds (200'):	120° 15 - 20 mph	Altostratus	Scattered	12,000	15,000	Solar Activity:	Low
	Probability of Violating Weather Constraints							
	30%	Primary Concerns: Cumulus Cloud Rule, Anvil Cloud Rules						
	Weather Conditions						Additional Risk Criteria	
	Weather/Visibility:	None / 7 mi.	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
Temp/Humidity:	84°F / 73%	Cumulus	Scattered	3,000	8,000	Booster Recovery Weather:	Low	
Liftoff Winds (200'):	120° 15 - 20 mph	Cirrus	Scattered	25,000	27,000	Solar Activity:	Low	
<b>Note:</b> The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.								
Next Forecast Will Be Issued		24 June 2021						